

Consumer Protection: Role of Food Forensics in Ensuring Food Safety

Chitra Shukla, PhD Research Scholar, Department of Law, Sri Padmavati Mahila Visvavidyalayam, Tirupati, Andhra Pradesh

G. Indira Priyadarsini, Assistant Professor, Department of Law, Sri Padmavati Mahila Visvavidyalayam, Tirupati, Andhra Pradesh

ABSTRACT

Nutritional food is very important for human survival. Today every person spends a lot of money purchasing food products, but due to the lack of quality in these food items our health is badly affected. The right to know about commodities before purchasing is a legal right of consumers, but due to misinformation about altered food items public health is affected. The Food Safety and Standards Authority of India (FSSAI) is entrusted with the responsibility of ensuring food safety and protecting the public health of consumers. The inadequate quality of food products sold in the market leads to serious illness and deaths of many people.

Food forensics is a scientific branch that uses various analytical techniques to ensure the safety of food products. It plays a crucial role in determining food fraud and adulteration, helping to ensure food safety and consumer protection. Different analytical techniques of food forensics can be used to analyse food contamination. Thus, strategies using food forensic methods are very useful in the protection of public health.

The research mainly aims to analyse the main food laws of India and their implementation to see how food safety is ensured in our country. Further, the judicial approach has been analysed through precedents to identify the challenges faced in protecting the right to quality food for consumers. This research results in exploring ways such as controlling corruption, employing food forensic techniques, effective implementation of food laws and many other ways so that food safety and consumer protection can be ensured.

Keywords: Food Laws, Consumer Protection, FSSAI, Food Adulteration, Food Forensics

Introduction

In India, the Food Safety and Standards Act, 2006 has been implemented by the Food Safety and Standards Authority of India (FSSAI). This Act was introduced on 23 August 2006. It focuses on ensuring food safety and consumer protection. The National Food Security Act, 2013 provides food and nutritional support to pregnant women, lactating mothers and children under 14 years of age. The Convention on the Rights of the Child also ensures the provision of healthy food and adequate nutrition for all children below 18 years, recognising it as a basic responsibility of governments.

The FSSAI sets standards for food products to ensure that they are safe for consumption. The main aim of such standards is to protect consumer health. Apart from setting up standards, it also lays down regulations specifying information on food packaging, including the name of the food, list of ingredients and nutritional value of the product. This information helps consumers in choosing between products. As food is a subject in the Concurrent List, the Food Authority at the centre and the State Food Safety Authorities jointly share the responsibility delineated by the Food Safety and Standards Act, 2006. The Food Authority at the central level frames policies, interventions and directions and is responsible for coordination at the national level. State and Union Territory Food Safety Authorities are responsible for monitoring whether food safety measures have been properly implemented at the ground level.

The NFSA provides subsidized food grains and nutritional support to vulnerable groups including children. The CRC and other international regulations recognise children as a special group and emphasize the importance of protecting them from harmful food and ensuring access to healthy and quality food. There are various regulations that aim to restrict the marketing of unhealthy food and beverages to children, especially near educational institutions.

Food forensics involves modern scientific methods that can be useful for ensuring food safety and consumer protection in India. These techniques ensure that consumers receive safe and quality food products. Further, they help in securing the right to health of consumers, which is generally affected by consuming contaminated food products. Proper use of these techniques by food safety authorities can be helpful in investigating altered food products and ensuring the public health of consumers.

Objectives of the Research

1. The first objective of the research is to study food laws in India.
2. The second objective involves analysing the implementation of food laws and their effectiveness in protecting consumer rights.
3. The next objective of the research involves identifying the challenges faced in the implementation of these laws.
4. The last objective of this research is to analyse food forensic techniques and other methods for ensuring food safety and consumer protection.

Research Problems

Food has been considered a basic necessity for living, but it is a bitter truth that millions of people die due to malnutrition, improper diet, food adulteration and other reasons associated with food products. Many consumers are cheated every day by various manufacturing companies and sellers by selling mixed food items such as spices, groceries, oils and numerous cooked food items sold in restaurants.

This research deals with the following questions:

1. How do food safety authorities ensure the purity of food items sold in markets?
2. What consumer rights are affected by the sale of mixed food items?
3. How does food adulteration affect human health?
4. Which legal steps can ensure the proper implementation of food laws in India?

Research Methodology

This study adopts a doctrinal legal research methodology supplemented by comparative and analytical approaches to evaluate the implications of food laws in India. The research aims to understand the current legal stance, identify gaps and suggest reforms for proper implementation of these laws.

The study is primarily qualitative and involves a systematic examination of statutes, case laws, legal commentaries, reports of food safety authorities and scholarly articles from socio-legal journals.

Comparative analysis of food laws of different countries has been done to explore ways that can be adopted to strengthen Indian food laws. Various books and research papers on food forensic techniques have also been studied to understand the strengths of these techniques for investigating and ensuring the quality of food products.

Primary sources include judicial decisions of the Supreme Court and High Courts, constitutional provisions and food laws such as the National Food Security Act, 2013 and the Food Safety and Standards Act, 2006. Secondary sources include books, journal articles, reports of food safety authorities, doctoral theses and publications involving statistical studies on the impact of food adulteration on health.

Food Related Issues at Global Level

The second Sustainable Development Goal of the United Nations aims to end hunger, achieve food security and improve nutrition. For this purpose sustainable agriculture practices have been promoted. The Food and Agriculture Organization (FAO), an important agency of the United Nations, has described hunger as a painful physical sensation caused by insufficient consumption of food.¹

Globally, around 9 percent of the world's population is suffering from hunger. It is estimated that 582 million people will be chronically undernourished by 2030.² Nearly one-third of rural adults face challenges related to food insecurity at the global level.

Apart from hunger, lack of regular access to sufficient nutritional food can severely affect health. Malnutrition or undernutrition affects both children and adults. FAO warns that children experiencing hunger and food insecurity are at higher risk of developing chronic diseases.³

Overview of the Food Laws in India

Food laws in India comprise rules and regulations that ensure food safety and maintain food standards for protecting consumer health. Earlier there were various Acts governing different food items, which led to a lack of uniformity. In 2006 all previous Acts were consolidated into a single legislation known as the Food Safety and Standards Act, 2006. This Act

established the Food Safety and Standards Authority of India to set uniform guidelines on food production, distribution, retailing and consumption and ensure their implementation.

The Act aims to reduce food adulteration and safeguard consumers against contaminated food and dishonest business practices.

Apart from the Food Safety and Standards Act, 2006 there are several regulations such as:

- Food Safety and Standards Authority of India Business Transaction Regulation, 2010
- Food Safety and Standards (Licensing and Registration of Food Businesses) Regulation, 2011
- Food Safety and Standards (Food Product Standards and Food Additives) Regulation, 2011
- Food Safety and Standards (Prohibition and Restriction on Sales) Regulation, 2011
- Food Safety and Standards (Packaging and Labelling) Regulation, 2011
- Food Safety and Standards (Laboratory and Sampling Analysis) Regulation, 2011
- Food Safety and Standards (Health Supplements and Nutraceuticals) Regulation, 2016
- Food Safety and Standards (Food Recall Procedure) Regulation, 2017
- Food Safety and Standards (Import Regulations), 2017
- Food Safety and Standards (Labelling and Display) Regulations, 2020

Results and Discussion

Various statistical data show that despite efforts to ensure nutritional food for everyone, approximately **4.2 lakh people die every year in India due to unsafe food consumption**. According to a World Health Organization report, nearly **600 million cases of food-borne illness occur in India annually**.⁴

Poor diet contributes significantly to deaths in India. A Lancet study ranks India second globally in deaths caused by inadequate diets.⁵ Malnutrition is another major contributor to deaths, particularly among children under the age of five. A UNICEF report indicates that malnutrition causes **69% of deaths in this age group**.⁶

Legal Challenges Faced in Ensuring Food Safety

The first challenge to food safety is the lack of regular checks conducted by food safety authorities on market products. According to the Act, food safety authorities conduct inspections only once a year. This increases the chances of selling substandard products.

Urbanization is another factor affecting food safety as unhealthy fast food consumption has increased due to urban expansion.

Another challenge is the **limited number of testing laboratories**. According to FSSAI data, India has **206 NABL-accredited primary food testing laboratories**, which are insufficient for nationwide monitoring.

Lack of trained personnel and corruption in enforcement agencies also hamper effective implementation of food safety laws.

Use of Food Forensics in Ensuring Food Safety and Consumer Protection

Food forensics is a scientific method used for testing food products. These technologies help ensure food safety by identifying contaminants and adulterants in food items.

Several food forensic techniques are commonly used, including:

- Gas Chromatography
- High Performance Liquid Chromatography (HPLC)
- Infrared Spectroscopy
- Nuclear Magnetic Resonance (NMR)
- Mass Spectrometry
- DNA-based testing
- Isotope analysis
- Sensory evaluation
- Microbiological testing
- Nutritional analysis

These techniques help detect contamination, identify adulteration and verify the authenticity of food products.

Recommendations and Conclusion

From the above analysis it can be concluded that the Food Safety and Standards Act has laid down various fines for food adulteration, but stricter punishments including imprisonment should also be imposed to ensure food safety and consumer protection.

Malnutrition, undernutrition and unsafe diets cause millions of deaths at both national and international levels. Therefore it is very important to control food adulteration and safeguard food security in India.

The following recommendations are suggested:

- Monthly monitoring of food products sold in the market.
- Inspection of manufacturing processes in factories.
- Consumer awareness programmes regarding food ingredients.
- Establishment of more food testing laboratories.
- Appointment of trained professionals in food forensic analysis.
- Imposition of imprisonment for serious food adulteration offences.
- Strict monitoring to prevent corruption and political interference.
- Monitoring of advertisements promoting food products.

By adopting the above reforms, food safety and consumer rights can be better protected in India.

References

1. Food and Agriculture Organization (FAO), *The State of Food Security and Nutrition in the World*.
2. United Nations, *Sustainable Development Goal 2: Zero Hunger Report*.
3. FAO Global Hunger Report.
4. World Health Organization, *Foodborne Disease Burden Epidemiology Reference Group Report*.
5. The Lancet, *Global Burden of Disease Study on Dietary Risks*.
6. UNICEF, *State of the World's Children Report*.